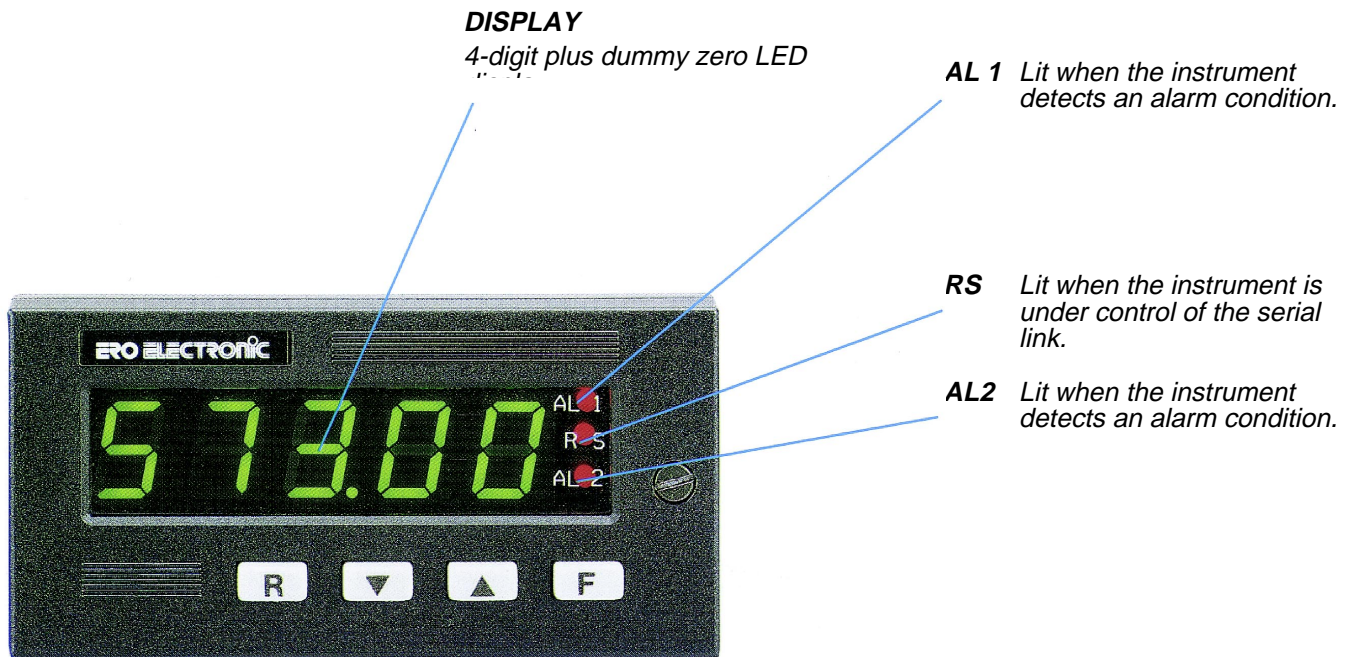


## Digital Programmable indicator for Linear input



### KEYBOARD DESCRIPTION

- Used to decrement/modify parameter value.
- Used to increment/modify parameter value or to select peak high, peak low or measure on the display.
- Used to display a new parameter and, at the same time, to store the actual parameter value (if present).
- Used to scroll back parameter without storing parameter value.
- +  Alarm 1 and/or alarm 2 manual reset.
- +  Alarm 1 and/or alarm 2 manual reset.
- +  Reset of peak high and peak low value and re-start for a new peak detection.
- +  Used to initiate default parameter loading procedure
- +  +  Used to lock/unlock keyboard for parameters modification.



## GENERAL SPECIFICATION

<b>Case:</b>	PC/ABS Black color. Self-extinguishing degree VO according to UL 94.
<b>Front protection:</b>	designed and tested for IP 65 (*) and NEMA 4X (*) for indoor locations (when panel gasket is installed).
<b>Installation:</b>	Panel mounting by means of tie-rods
<b>Rear terminal block:</b>	22 screw terminals completed with connection diagram and safety rear cover.
<b>Dimensions:</b>	DIN 43700 48 x 96, 144 mm depth
<b>Cut-out:</b>	45 x 92 mm +0.8 mm -0 mm
<b>Weight:</b>	600 g
<b>Display:</b>	5 yellow/green 7-segment LED's, 13.2 mm high
<b>Indicator:</b>	2 red LED's for alarm annunciator function 1 red LED for Local/Remote control
<b>Power supply:</b>	Switching type, 85 to 264 VAC 50/60 Hz or 24 VAC/DC (±10%)
<b>Power consumption:</b>	7 VA.
<b>Insulation resistance:</b>	>100 MΩ according to IEC 1010-1
<b>Dielectric strength:</b>	1500 V rms according to IEC 1010-1
<b>Sampling time:</b>	100 ms typical.
<b>Display updating time:</b>	400 ms typical.
<b>Accuracy:</b>	±0.1% fsv ±1 digit @ 25 °C
<b>Temperature drift:</b>	< 200 ppm/°C of the fsv
<b>Common mode rejection ratio:</b>	120 dB @ 50/60 Hz
<b>Normal mode rejection ratio:</b>	60 dB @ 50/60 Hz
<b>Electromagnetic compatibility and safety requirements:</b>	This instrument is marked CE. Therefore, it is conforming to council directives 89/336/EEC (reference harmonized standard EN-50081-2 and EN-50082-2) and to council directives 73/23/EEC and 93/68/EEC (reference harmonized standard EN 61010-1). II.
<b>Installation category:</b>	II.
<b>Operative temperature:</b>	0 to 50 °C
<b>Storage temperature:</b>	-20 to +70 °C
<b>Humidity:</b>	20% to 85% RH non condensing.

## INPUT

The following ranges are keyboard and jumpers selectable.

STANDARD RANGES TABLE

Range	Input impedance
0 - 20 mA	3 Ω
4 - 20 mA	3 Ω
0 - 5 V	>200 kΩ
1 - 5 V	>200 kΩ
0 - 10 V	>200 kΩ
2 - 10 V	>200 kΩ

<b>Input capability:</b>	-20% to +120% of selected scale.
<b>Square root extraction on the measured value:</b>	programmable.
<b>Readout:</b>	Keyboard programmable with decimal point in any position. Resolution 1 digit for readout up to 10000 Resolution 10 digits for readout up to 99990
<b>Burn out:</b>	the input open condition will be recognized and displayed only for 4-20 mA, 1-5 V or 2-10 V inputs. The retransmission will go down scale

## ADDITIONAL FUNCTION

<b>Display filter:</b>	Digital filter, of first order, on displayed value with configurable time constant (400ms, 1s, 2s, 3s, 4s or 5s).
<b>Peak detection:</b>	Automatic detection of maximum and minimum measured value
<b>Logic Input:</b>	To be driven by dry contact for manual alarm reset or for hold on measure.
<b>Watch dog:</b>	Hw/Sw is provided for automatic restart
<b>Protections:</b>	Internal jumper for calibration and configuration parameters protection

(\*) Test were performed in accordance with CEI 70-1 and NEMA 250-1991 STD.

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## ALARMS

<b>Number of alarm:</b>	Two independent alarms
<b>Threshold:</b>	within the readout range. Resolution and decimal point position as selected for readout range.
<b>Hysteresis:</b>	0.1 to 9.9% of readout span
<b>Filter:</b>	It is possible to enable a digital filter with the same time constant chosen for the readout
<b>Type of alarm:</b>	High/Low alarm Direct/Reverse action Automatic/manual reset Mask alarm or standard alarm.
<b>Alarm output:</b>	Two contacts SPST NO or NC with jumper selection.
<b>Alarm output update time:</b>	100 ms.
<b>Contact rating:</b>	2A @ 30 VDC on resistive load 0.6 A @ 110 VDC on resistive load 0.5 A @ 220 VAC on resistive load 0.3 A @ 110 VDC on inductive load

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## AUXILIARY POWER SUPPLY

<b>Isolation:</b>	Galvanically isolated from instrument inputs and outputs.
<b>Voltage output:</b>	24 V DC.
<b>Accuracy:</b>	±5%
<b>Max. power:</b>	1.25 Watts

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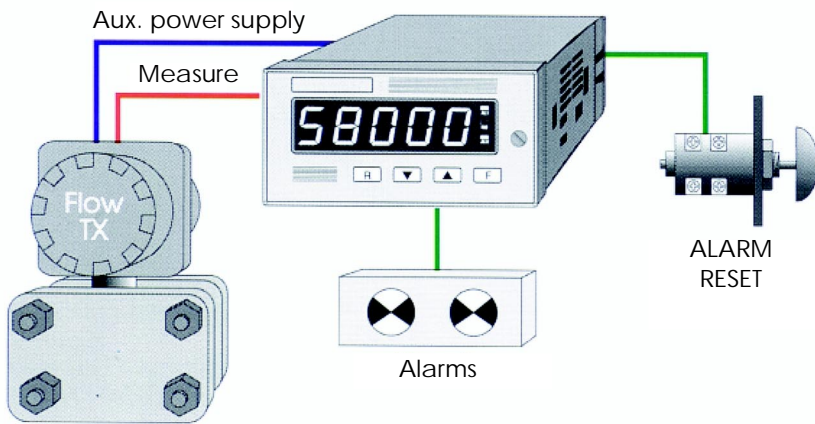
## SERIAL COMMUNICATION INTERFACE

<b>Type:</b>	RS-485 optoisolated from instrument inputs/outputs.
<b>Protocol:</b>	Polling/Selecting
<b>Baud Rate:</b>	from 150 to 19200 baud
<b>Format:</b>	7 bits + parity 8 bits + parity 8 bits without parity
<b>Parity:</b>	Even or Odd.
<b>Stop bit:</b>	One
<b>Address:</b>	from 1 to 95
<b>NOTE:</b>	Serial communication interface and analog retransmission are mutually exclusive

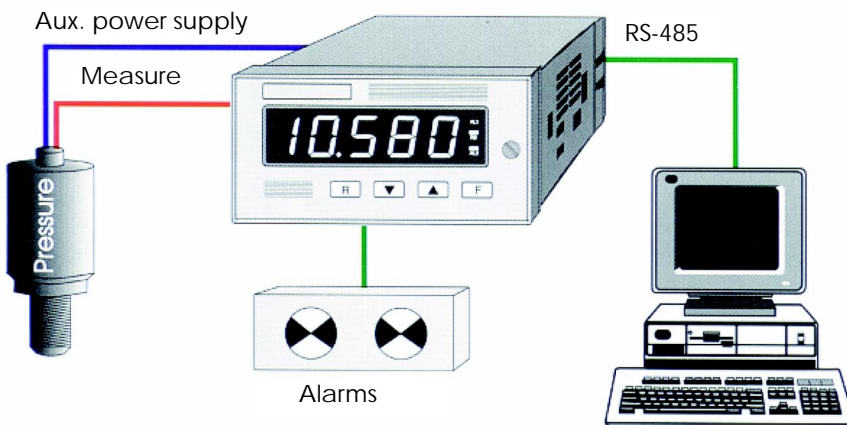
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## ANALOG RETRANSMISSION

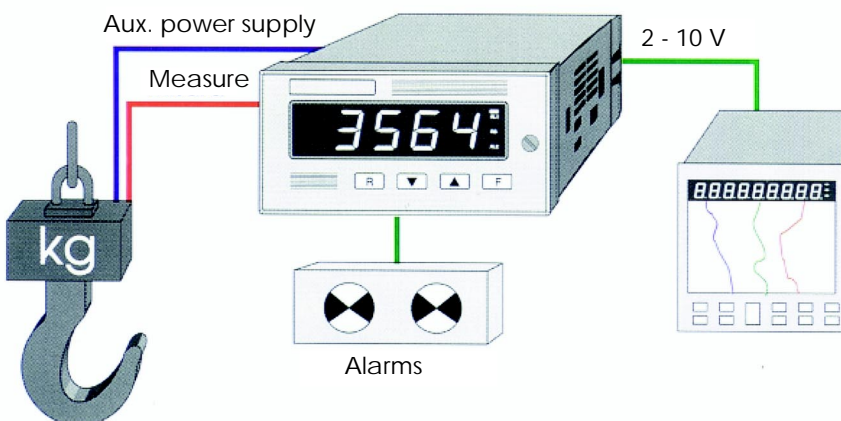
<b>Output type:</b>	Optoisolated 0-20 mA, 4-20 mA (max load 500 Ω) 0-10 V, 2-10 V (min. load 5 kΩ) (Keyboard and jumpers selectable)
<b>Scaling:</b>	From 0 to 99990 Decimal point position as selected for readout value.
<b>Output resolution:</b>	Max 0.05% of output span (scaling can worsen output resolution)
<b>Filter:</b>	It is possible to enable a digital filter, on the output retransmission, with the same time constant chosen for the readout.
<b>Accuracy:</b>	0.2% of output span.
<b>Temperature drift:</b>	<100 ppm/°C (plus input drift).
<b>Output noise:</b>	< 0.1% fsv RMS.
<b>Updating time:</b>	100 ms.
<b>NOTE:</b>	Analog retransmission and serial communication interface are mutually exclusive.



The DPL has a built-in 24 V auxiliary power supply able to supply 2-or 4-wire field transmitters. This feature simplifies the system and reduces the cost. This instrument is also provided with two independent alarms programmable for automatic reset or manual reset. The manual reset can be made by front keyboard or by an external contact closure



The DPL can be delivered with RS-485 optoisolated serial interface in order to allow the use of the instrument as a part of a computerized acquisition/supervision system.

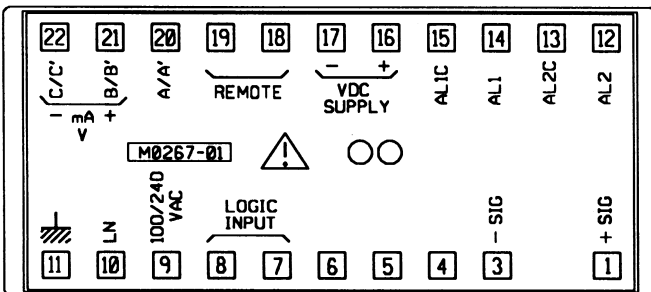


The DPL is available with an isolated analog retransmission which allows to solve a lot of plant problems like recording, trending or to display the measured value on field and in control room.

## HOW TO ORDER

Standard models	Description
Power supply 85 to 264 V AC	
D P L 7 0 0 2 1 4 0 0 0	With 2 alarms
D P L 7 0 0 3 1 4 0 0 0	With 2 alarms plus RS 485 interface
D P L 7 0 0 8 1 4 0 0 0	With 2 alarms plus analog retransmission
Power supply 24 V AC/DC	
D P L 7 0 0 2 1 5 0 0 0	With 2 alarms
D P L 7 0 0 3 1 5 0 0 0	With 2 alarms plus RS 485 interface
D P L 7 0 0 8 1 5 0 0 0	With 2 alarms plus analog retransmission

## REAR TERMINAL BLOCK



## DIMENSIONS AND PANEL CUT-OUT

